Vultures

Figure 1. Black vultures (*Coragyps atratus*) are very social with an extended period of parent-offspring interaction.

Authors

Michael L. Avery
Supervisory Research Wildlife Biologist
USDA-APHIS-Wildlife Services-
National Wildlife Research Center

Martin S. Lowney
State Director
USDA-APHIS-Wildlife Services-New York

Overview of Damage Prevention and Control Methods

Habitat Modification

- No proven guidelines for how to thin vegetation or modify roost sites

Exclusion

- Electric track, coyote roller, and stout anti-perching spikes

Frightening Devices

- Vulture effigies, hand-held lasers, and pyrotechnics to disperse roosts

Repellents

- None available

Toxicants

- No toxicants are registered

Shooting

- Effective for individual troublesome vultures
- Type of firearm and ammunition depends on specific circumstances.

Trapping

- Large baited walk-in traps
- Padded-jaw foothold traps with 3-inch jaw spread.
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Species Profile

Identification

Two species of vultures are common in North America: the turkey vulture (*Cathartes aura*) and the black vulture (*Coragyps atratus*). They are in the family Cathartidae. Vultures often are known locally as buzzards.

Physical Description

Turkey vultures are large dark brown birds with 5.7- to 6-foot wing spans and a body mass of 3.5 to 4.4 pounds. Distinguishing characteristics of turkey vultures are a bright red head on adults, the leading edge on the underside of the wing is black while the trailing edge is gray, and a long tail extends well beyond the body when in flight (Figure 2).

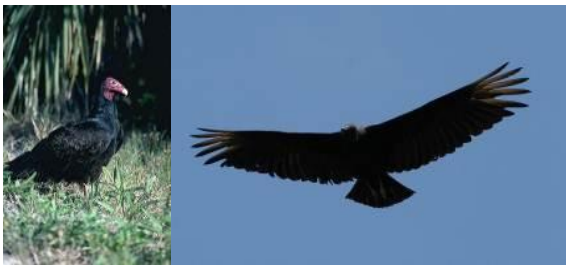

Figure 2. Turkey vultures (*Cathartes aura*) are characterized by long, narrow wings, a relatively long tail, and a red head (in adults).

In contrast, black vultures have a 4.6- to 5-foot wing span and weigh 3.5 to 4.9 pounds. Adult and juvenile black vultures have a dark gray head, the underside of the wings is dark gray to black with a white area at the end of each wing, and a relatively short tail (Figure 3).

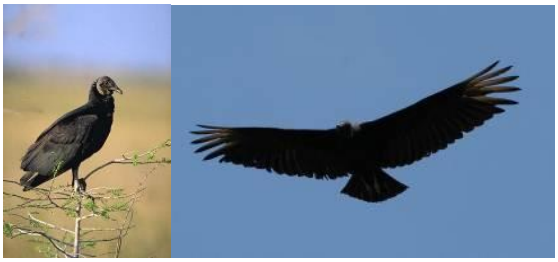

Figure 3. Black vultures have a black head and broad white-tipped wings.

The mode of flight between black and turkey vultures differ due to different wing lengths supporting about the same body mass. Turkey vultures flap their wings a few times and glide when at low altitudes, whereas black vultures flap frequently, interspersed with brief glides when at low altitudes unless a strong wind blows. At high altitudes both vultures primarily glide when riding thermal wind currents.

Range

Turkey vultures occur in all of Mexico, most of the US, and the southern tier of Canada. Black vultures are common in South America and Central America and occur throughout the southeastern US, Texas, Mexico, and parts of Arizona. Their range has continued to expand into New York and the Great Lake States.

The ranges of both species have expanded northward in the past 50 years. Several possible explanations exist for their range expansions and population growth. The pesticide DDT and its derivative DDE adversely affected vulture fecundity. The US Environmental Protection Agency prohibited the use of DDT in 1972 due to negative environmental impacts to many animal species, and vulture populations in the US have grown steadily in the last 40 years.

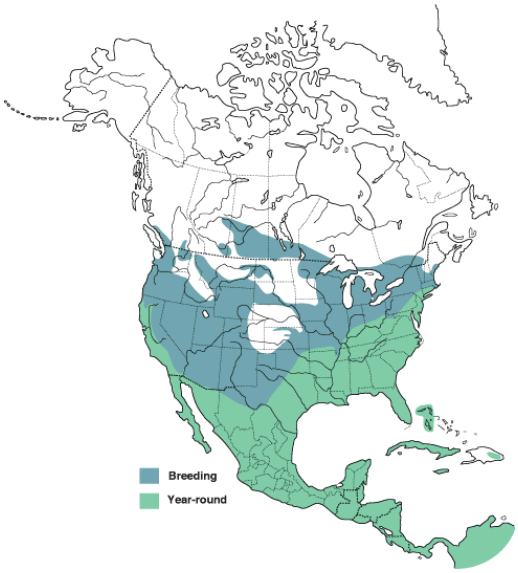

Figure 4. Distribution of turkey vultures in North America.

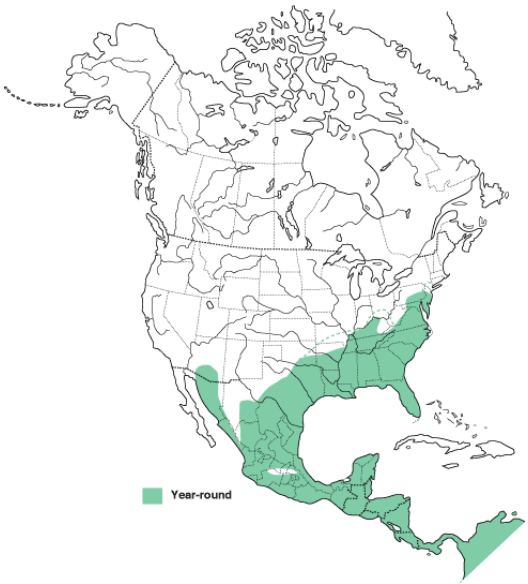

Figure 5. Distribution of black Vultures in North America.

The recent gradual, overall warming trend in North America might have contributed to these broad-scale northern range expansions. Also, vultures have benefited from fragmentation of the landscape by humans, which creates mosaics of forested and open areas for roosting, nesting, and foraging. Vultures clearly have adapted and thrived in the presence of human activity.

Some turkey vultures migrate from northern breeding areas in fall to overwinter in southern areas. Black vultures are considered locally resident, but they engage in short term local movements in advance of bad weather.

Voice and Sounds

Black vultures make a low-pitched grunt or "woof," audible at close range, when disturbed.

Tracks and Signs

Nests in structures or abandoned vehicles are found by observing movements of adult birds. Nests on the ground are very shallow scrapes and difficult to find. Roost sites are characterized by a distinctive ammonia-like odor, and by accumulations of droppings, feathers, and regurgitated pellets.

General Biology

Reproduction

The US-wide population trend of turkey vultures, from the Breeding Bird Survey data suggests an annual rate of increase of 3% for 1999 to 2009. Black vulture population data, mainly from North Carolina, suggest that high rates of survival and fertility, offset by first breeding at about 5 years of age, combine to produce an annual rate of increase of 10.6%.

It is believed vultures nest annually. Each species normally lays a 2-egg clutch. Incubation lasts about 40 days. Adults feed and care for young for 2 to 3 months before fledging. A lengthy period of parental care ensues as the young birds learn to forage.

Nesting Cover

Vultures nest on the ground in thickets, on rock ledges, in caves and hollow logs, and in abandoned buildings and vehicles. In Florida, black vultures nest as early as January. Vultures congregate in single- or mixed-species communal roosts, especially during late fall through early spring. Roosting is believed to enhance the ability to find food and may reduce risk of predation. Roosts may contain thousands of vultures.

Mortality

Turkey vultures have been reported to live for more than 17 years. The most common cause of illness, injury, or death is trauma from collisions or injuries from foothold traps, principally among juveniles.

Black vultures have been reported to live to 25 years of age. Predation on eggs and non-flying young may be common and collisions with power lines and shooting for livestock protection are additional sources of mortality. Analysis of the black vulture population in Virginia indicated that 3,500 birds could be culled annually from the population without adversely affecting its long-term sustainability.

Population Status

The population trend for both species is increasing. The median population estimate for black vultures in Virginia was 91,190 in 2006. Similar estimates are not available for other states.

Habitat

Both species of vultures inhabit mixed farmland, pasture, and wooded areas. For loafing and foraging, black vultures seem particularly partial to the shores of ponds, lakes, and other bodies of water (Figure 6).

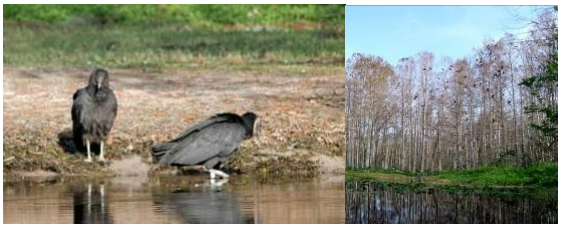

Figure 6. Black vultures often roost and forage near water.

Vultures roost in various types of trees including pine, cypress, palm, and hardwoods, as well as on communication towers, support structures for transmission lines, water tanks, and buildings. Roost trees typically are larger than average surrounding trees. Vultures often occur at sanitary landfills and are known to loaf on office buildings and houses. Black vultures especially are tolerant of human activities and habituate to being close to people.

Behavior

Turkey and black vultures fill important ecological roles as scavengers in the environment. Dead animals may have bacteria or viruses that are pathogenic or zoonotic. When feeding on carcasses, vultures consume and destroy large quantities of various bacteria before the bacteria form spores resistant to digestion. It is possible, however, that while some bacteria are destroyed in a vulture's digestive tract, some bacteria could be transmitted on the bird's feathers and feet. Thus, while vultures could reduce the spread of most infections in a locality, they also could introduce infections into new areas. The intestinal micro flora of turkey vultures suggests that these birds are reservoirs of intestinal bacterial pathogens.

Vultures have weak feet for grasping but have strong bills for pulling and tearing flesh. Their eyesight is keen, and the olfactory sense is highly developed in turkey vultures, but less so in black vultures. Black vultures rely on eyesight to locate sources of food and fly at higher altitudes than turkey vultures. From that vantage point, they can observe behavior of turkey vultures and other scavengers to learn the location of available food. At a carcass, black vultures are dominant over turkey vultures. Turkey vultures tend to specialize on smaller carcasses, which they can quickly ingest before black vultures have time to displace them.

Food Habits

Turkey and black vultures primarily are scavengers. Their diets include carrion, fish, and invertebrates. Black vultures will kill other animals and tear the animals apart for food, including livestock giving birth and their defenseless offspring. Turkey vultures rarely take live prey. Reports of turkey vultures attacking livestock likely are mistaken identification of black vultures.

Landfills are major feeding sites for turkey and black vultures, where they join crows, gulls, and many other species (Figure 7).

Figure 7. Vultures frequently join other species to feed at landfills.

On a smaller scale, black vultures often plunder dumpsters and garbage cans, and they frequent waste transfer stations, zoos, and any place where food scraps regularly are available (Figure 8). Both species are opportunistic and capable of exploiting feeding opportunities created by human activity.

Figure 8. Vultures exploit feeding opportunities created by human activity.

Legal Status

Vultures are protected by the Migratory Bird Treaty Act (MBTA) and are managed by the federal government. Vultures may be harassed without federal permits, but can be killed only after obtaining a Migratory Bird Depredation Permit from the US Fish and Wildlife Service (USFWS). State wildlife agencies may require state permits prior to killing migratory birds.

Human Wildlife Conflicts

Vultures cause problems in several ways. The most common problems associated with vultures are structural damage, loss of aesthetic value and property use related to offensive odors and appearance, depredation to livestock and pets, and air traffic safety.

Management of these diverse problems often can be addressed by targeting the source of the birds causing the problem…namely the roost where the birds spend the night. Often the roost itself is the problem, such as when birds roost on a communication tower and foul the equipment with their feces or when they roost in a residential area. Droppings and regurgitations create obnoxious odors and their presence is perceived as a threat by the homeowners. Several methods are available for roost dispersal. As in many other situations, roost dispersal might best be accomplished through the integrated use of more than one method.

The details of the situation will dictate which management approach is the most appropriate, and experience has shown that best results are obtained if the source roost can be dispersed.

Livestock and Pets

Loss of livestock to black vultures is a major concern for many producers. Black vulture depredation of livestock involves killing or injuring animals that are sick, weak, or otherwise unable to defend themselves. Predation usually involves new-born calves, piglets or lambs and the associated heifers, sows, and ewes (Figure 9). Black vultures are opportunistic and readily recognize and take advantage of vulnerable animals. The feeding behavior of one or two black vultures usually attracts many more and they can easily overwhelm a prey animal.

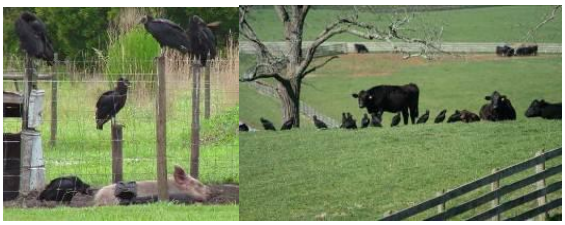

Figure 9. Livestock producers must be vigilant because black vultures are known to attack vulnerable animals, especially new-borns and those giving birth.

At a cattle ranch in central Florida, both species of vultures focused their activities in pastures where active calving was occurring. The vultures were frequently observed feeding on afterbirth as well as fresh droppings from calves.

Structures

Property damage, especially from black vultures, includes tearing and removing window

caulking, screen enclosures, roof shingles, vinyl seat covers from boats and tractors, windshield wipers and door seals on cars, and plastic flowers at cemeteries (Figure 10).

Figure 10. Damage by black vultures to structures, vehicles, and other property is a common occurrence.

Droppings of turkey and black vultures create nuisance conditions, especially when the birds loaf on roofs of houses, office buildings, communication towers, and electrical transmission structures (Figure 11). The accumulation of droppings on electrical transmission towers causes arcing and power outages.

Figure 11. Vultures frequently loaf and roost on buildings and other structures where accumulations of droppings create nuisance and health concerns.

Human Health and Safety

Vultures pose hazards to aircraft, especially when landfills, roosts, or other congregating sites are located near approaching or departing flight paths (Figure 12).

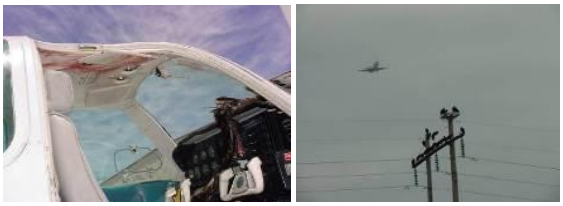

Figure 12a (left), 12b (right). Vultures represent major safety hazards to civil and military aircraft.

Landfills are attractive to birds that are hazardous for aviation. Thus, the Federal Aviation Administration considers putrescible waste landfills within 10,000 feet of an airport with jet aircraft are incompatible with aircraft operations

In addition, vultures can cause human health and safety problems by contaminating water sources with their droppings. Contamination has occurred when coliform bacteria from droppings entered water towers or springs from which residences drew water.

Nuisance Problems

Citizens frequently have health concerns because of the accumulation of droppings from roosts and loafing areas near their homes (Figure 13). Many people consider vultures a nuisance because of the white-wash effect their droppings leave on trees and structures at roost sites, the ammonia odor emanating from roost sites, and a general feeling of doom when vultures congregate nearby.

Figure 13. Fecal material from vulture roosting and loafing behavior can render facilites such as playgrounds unsafe and unappealing.

Damage Identification

Vultures are large, obvious animals that travel in groups. Their presence is indicated by copious amounts of whitish fecal matter giving a characteristic ammonia odor to the surroundings. In open areas, shed feathers and regurgitated pellets also will be obvious (Figure 14). Damage to materials and surfaces is indicated by tears, scratches, and gouges.

Figure 14. Fecal accumulation, feathers, and regurgitated pellets indicate presence of a vulture roost.

Wildlife Damage Prevention and Control Methods

Integrated Wildlife Management

Management of vultures is most effective when a variety of control methods is used.

Habitat Modification

Vultures are attracted to roost sites for reasons largely unknown. Altering the vegetation structure of a given roost may affect the thermodynamic properties of the site. Therefore, thinning branches on trees within the roost or removing some trees to open up the roost site could reduce the attractiveness of the site for roosting birds. This method will be difficult to apply in most cases, as preservation of trees is an important goal in most communities. Furthermore, no proven guidelines are available on how best to thin or modify roost vegetation to discourage vultures.

Vultures may be attracted to a site repeatedly due to the abundance of a stable food supply. The proper disposal of dead livestock and removal of other human-made foods may reduce use of some areas by vultures. Vultures may use a site for multiple reasons, however, and the removal of a food source might be insufficient to disperse vultures that are roosting or loafing at a site.

Exclusion

Various techniques have been developed to prevent vultures from perching on window ledges, roofs, and other areas where they are not wanted. Many of the various bird spikes that are commercially available will not deter vultures. In many cases, the birds are able to place their feet in the spaces between the spikes, and they readily bend the longer, more supple spikes down to create a hospitable perching substrate. The spikes that work best against vultures are short, sharp, tightly spaced, and resistant to bending. Wires suspended above a roof or ledge do not have long-term effectiveness as vultures can avoid such obstacles when they land and either perch beside the wires or directly on top of them.

Coyote Roller® is a commercially available device that can create an unstable perch for vultures. As birds try to land on the devices, the cylinder rotates and the birds fall off. They are particularly effective on the ridge line of a roof or narrow ledge or railing where the availability of perch sites is limited (Figure 15).

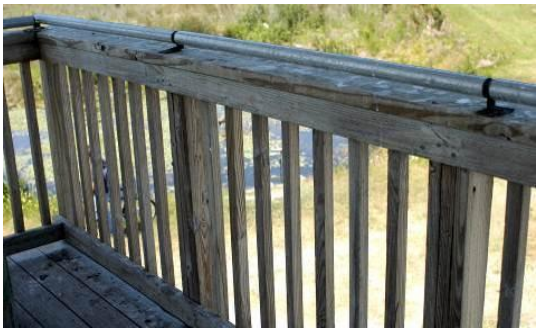

Figure 15. The Coyote Roller® can be an effective device for preventing vultures from perching.

Perhaps even more effective is the use of commercially available electric shock tracks. They can be assembled to any length and affixed to roofs, chimneys, ledges, or wherever perching is likely to occur. Solar-powered electric fence chargers are available, so access to an AC outlet is not necessary. A bird that contacts the track receives an unpleasant but harmless shock and leaves the site.

Livestock depredation by black vultures can be minimized by locating lambing, pigging, and calving activities in sheds, or by using paddocks

close to barns or buildings with human activity so that birthing animals can be monitored closely.

Frightening Devices

Auditory Techniques

Vultures can be harassed from a roost by pyrotechnics (screamer-sirens and bird bombs) fired from a 15-mm launcher (starter pistol), shellcrackers shot from a 12-gauge shotgun, electronically generated sounds, or propane cannons. Prior to initiating a harassment program in an urban area, consult state, provincial, county, and local ordinances regarding the possession and use of firearms and pyrotechnics, noise ordinances, and bird sanctuaries. Auditory frightening devices can be purchased from a variety of commercial sources. Some pyrotechnics require a federal explosives permit from the US Bureau of Alcohol, Tobacco and Firearms. Commercial vendors can identify pyrotechnics requiring the federal permit prior to purchase.

Other harassment options. Pyrotechnics and other noisemakers often are not permitted in residential areas, zoos, parks, or business sites. Nevertheless, vultures can be effectively harassed using other methods. If sufficiently dark, lasers can be applied to move vultures. Even during daylight hours, lasers can be used as long as the birds are able to detect it against the ambient light. Alternatively, paintball guns can be employed with good effect on troublesome vultures. The birds are bothered by the sound of projectiles whizzing past and they do not enjoy being struck by a paintball. Eventually the "pop" sound generated by the compressed gas alone is enough to cause birds to take flight. To minimize the chance of injury, birds should not be shot at close range (less than 10 yards). Follow proper firearm safety measures whenever using paintballs. For best results, harass birds as soon as they begin to use a site. Harrassment must be persistent so that birds do not have opportunities to return.

Another option for harassment is a motion-activated sprinkler (Figure 16). All that is required is a spigot or other source of pressurized water. The sudden onset of a sprinkler triggered by the vultures' movement startles them and tends to keep them from the site. The sound of the sprinkler, sight of the water stream, and unpredictability of the stimulus all likely combine to cause a deterrent effect. Such units have been successful against vultures on roofs of houses, on boat docks, and around backyard patios.

Figure 16. Motion-activated sprinklers are effective for scaring vultures from rooftops, boat docks, and other places with access to a source of pressurized water.

Rifles of .22-caliber or larger will disperse loafing vultures from pastures. Pyrotechnics or shotguns also can be used, but their range is limited. Such harassment often has only a short-term benefit, as vultures will return to the site within a few hours. Do not kill or wound vultures unless you have a Migratory Bird Depredation permit issued by the USFWS.

Visual Techniques

Vulture effigies. In most roost situations, whether in trees or on a structure, birds can be dispersed quickly and efficiently by proper installation of a vulture carcass or effigy. An effigy can be either a taxidermic preparation or an artificial device designed and constructed to look like a dead vulture.

Regardless of the type, proper installation is crucial. Display the carcass or effigy from a high, prominent location so that birds using the roost notice it. Hang the device upside down by its

feet, far enough from branches or other points of contact to prevent entanglement. Hire a professional to install the carcass or effigy on a tower (Figure 17).

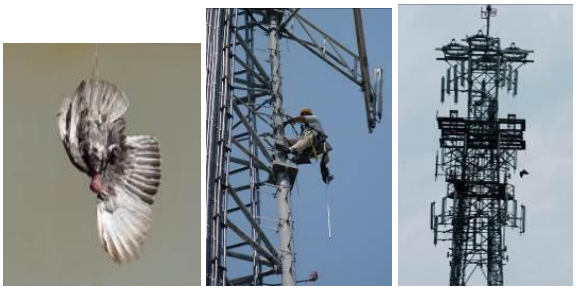

Figure 17. Installation of an effigy is effective for dispersing a vulture roost.

To suspend a carcass or effigy at a tree roost, use a modified bow and arrow rig to launch a line up and over a branch in a prominent location.

Vulture carcasses and taxidermic vulture effigies have been effective in resolving a variety of roost problems involving property damage, communication towers, crop and livestock protection, and aircraft safety. Generally, vultures that encounter a hanging carcass or taxidermic effigy vacate their roost within 5 days and do not return as long as the device is in place. In some cases, vultures do not return even when the carcass or effigy is removed.

Despite generally excellent results, this roost dispersal method is not universally effective. Where vultures occupy mixed-species roosts with wading birds, cormorants, and anhingas, installation of a vulture carcass or taxidermic vulture effigy has been ineffective. It is not clear why vultures in multi-species roosts are unresponsive to the effigy approach. Perhaps the birds sense greater security with the other species present. Whatever the reason, other methods need to be applied to disperse mixed-species roosts.

Effigies have been used with mixed success to discourage vultures using of houses and other facilities during daytime. Black vultures have been reported to tear effigies when used at daytime loafing sites but are repelled from roost sites where effigies are hung. It is unclear why vultures respond to effigies at roosting locations but occasionally show no dispersal response from daytime loafing sites. Also, effigies have not reliably dispersed vultures from multi-story buildings, or from small animal parks and zoos. We do not yet understand why effigies are not effective in some of these situations.

Dispersal of vulture roosts near a livestock operation can help reduce the likelihood that depredations will occur (Figure 18).

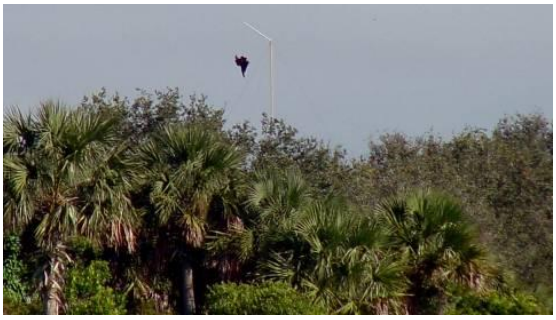

Figure 18. Vulture effigy erected at a vulture roost on a cattle ranch in south-central Florida.

Dispersal often is best accomplished by suspending a vulture carcass or taxidermic effigy in the roost, but other roost dispersal options, such as pyrotechnics, could produce a similar result. Roost dispersal is not always an effective option, however, as vultures are capable of using various roost sites within a given area. Thus, dispersal at one main roost location might cause birds to relocate to alternate roost sites but might not affect their use of livestock production areas.

Important constraints apply to the general use of a vulture carcass or taxidermic effigy. Both species of vultures are protected by federal laws, and it is unlawful to take or possess a live bird or carcass without a permit from the USFWS. Permits are not required for effigies made from feathers of domestic fowl. The

hanging of a vulture carcass or taxidermic effigy could be distasteful to some members of the public. It might be prudent to contact local conservation or birding groups or local media to explain the use of the carcasses or effigies, so that those hung in areas of high visibility are not mistaken for birds that accidentally became entangled. Prolonged exposure to the weather deteriorates carcasses and effigies.

The development of an effective, durable, readily available artificial effigy is desirable because no permit would be needed to use it. To date, the most consistently effective artificial effigy is a decorative vulture statuette made in China and sold on-line (Figure 19).

Figure 19. Artificial vulture effigy used for roost dispersal.

The likeness is approximately 16.5 inches tall. The body is covered with brown feathers and the head is red. The effigy has been used to disperse vulture roosts from trees, towers, refinery plants, and power plants.

Lasers. This tool recently became available for wildlife managers and has been effective in dispersing various species of birds. Vultures respond well to low-powered red lasers. Field trials at wooded roosts, as well as on buildings and electric transmission line towers, have repeatedly demonstrated that vultures can be moved from roosts by using lasers from about 30 minutes before sunset, or as soon as it is dark enough for the birds to see it, until about 30 minutes after sunset. Once it becomes too dark and the birds are settled in for the night, the laser generally will not dislodge them.

Generally, vultures respond immediately to the bright spot of light and either take flight or hop to a new perch. As soon as the first few birds take off from the roost, others follow, so that dozens of birds can be dislodged by directing the laser at just a few vultures.

Lasers are safe, quiet, and effective over distances of several hundred yards, depending on ambient light. Vultures can be dispersed without disruption to people and from well beyond the effective range of pyrotechnics. One downside is that vultures may habituate to lasers after several nights of harassment. Birds will vacate a roost for a given night but then return the next night. It is not known how long laser harassment needs to continue for permanent abandonment of a roost. In addition, lasers can cost up to $2,000.

Other visual deterrents. Helium-filled balloons tethered by Mylar® tape and raised into hardwood trees at roost sites have dispersed vultures in the past. Roost sites were in urban areas where either vultures had habituated to noise harassment or local noise ordinances did not allow harassment with pyrotechnics and other auditory scare devices. In each instance, 40 to 100 vultures were present and left the roost area immediately, but returned 6 to 12 months later when the balloons and Mylar® tape had fallen from the trees. Vultures habituated to balloons and no longer dispersed after balloons had been used for 2 years in Appomattox, Virginia.

Biological Techniques

Guard dogs are another form of harassment that some producers use with success. While we are not aware of any formal evaluation of this method to protect livestock from black vultures, we have talked to livestock producers whose dogs chase vultures. This method seems like a feasible alternative if the dog is properly trained.

To be most effective, harassment must be diligent and constant, and initiated as soon as the problem is recognized. The use of a variety

of harassment tools at the same time increases the likelihood of dispersing vultures. To disperse a roost, begin harassment at dusk as the vultures come to roost and continue until dark. Harassment on several consecutive nights may be required to disperse a roost. Normally, it takes 7 to 9 consecutive nights of harassment to disperse a vulture roost when 15 mm and 12-gauge pyrotechnics are used alone or with propane cannons. The number of nights needed to disperse a roost can be shortened to 4 to 5 nights when effigies and lasers are used simultaneously with the pyrotechnics. On some occasions, it may be necessary to shoot some vultures to reinforce harassment with pyrotechnics and reduce acclimation to the harassment program.

Trapping

Vultures are relatively easy to trap, especially with large baited walk-in traps (Figure 20). Turkey vultures seem inhibited from entering traps already holding black vultures.

Figure 20. Baited walk-in traps are effective for capturing large numbers of vultures.

For specific targeted individual birds, padded-jaw foothold traps can be used. For example, in Virginia and Maryland, vultures were damaging buildings by pulling latex gaskets from windows, tearing holes in rubber roof membranes, and disturbing building occupants with persistent daily attacks against their reflections in the glass. After nonlethal methods failed to stop the damage, the vultures were captured with padded-jaw foothold traps placed around carcasses on rock ballast roofs of multi-story buildings. Trapped vultures were euthanized and damage ceased.

Shooting

Given increasing population trends for both vulture species and their basic life history attributes, selective lethal control is unlikely to affect the overall population. Selective removal of problem vultures, however, could contribute to resolving local conflicts with vultures.

At three Texas industrial plants, each hosting about 200 birds, shooting with .22-caliber rifles was initiated after other methods had failed to resolve vulture problems. Removal of 5, 25 and 45 vultures resulted in abandonment of the sites for 12 months, 4 months, and 10 weeks, respectively.

Additional documentation is needed to support the assertion that removal of a few vultures from a local population increases the efficacy of harassment programs and prevents acclimation to harassment. A Migratory Bird Depredation Permit issued by the USFWS is required before vultures can be killed.

Handling

Relocation

Relocation is not recommended, as there are no data demonstrating its use as an effective vulture management method.

Translocation

The benefits of translocating trapped vultures are questionable. In Texas, translocating trapped birds did not reduce problems at industrial facilities where the birds were trapped. Furthermore, complaints increased regarding vultures at the release sites. In Florida, four of eight transmitter-equipped vultures released more than 150 miles from the trap site eventually were tracked to within 10 miles of their original roost, indicating that problems at the original site are likely to persist unless the habitat is modified so the original site is less attractive to vultures. Although translocation is a nonlethal control method,

little evidence exists that supports translocation of vultures is an effective management tool.

Disposal

Check your local and state or provincial regulations and USFWS depredation permit regarding carcass disposal.

Acknowledgments

Figures 1 and 10b. Photos by Martin S. Lowney.

Figures 2, 9, 11b, 14-18. Photos by Eric A. Tillman.

Figures 3, 8, and 20. Photos by Michael L. Avery.

Figure 4. Range maps from Kirk and Mossman 1998, The Birds of North America.

Figure 5. Range maps from Buckley 1999, The Birds of North America.

Figures 6, 7, 11a, 12b, 13, 19. Photos by John S. Humphrey.

Figure 10a. Photo by David Klein.

Figure 12a. Photo by USDA.

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Key Words

Aircraft hazard, Black vulture, *Cathartes aura*, *Coragyps atratus*, Effigy, Laser, Livestock damage, Property damage, Turkey vulture

Glossary

Effigy: A likeness of a vulture. An effigy can be an actual vulture carcass, a carcass that has been taxodermically prepared, or an artificial vulture likeness.

Property damage: Includes marring, tearing, scratching, defecation and soiling residential and business structures, vehicles, boats, cell towers, signage, playground equipment, etc.

Disclaimer

Implementation of wildlife damage management involves risks. Readers are advised to implement the safety information contained in the Manual of the National Wildlife Control Training Program.

Some control methods mentioned in this document may not be legal in your location. Always use repellents and toxicants in accordance with EPA-approved labels and your local regulations. Wildlife control operators must consult relevant authorities before instituting any wildlife control action.

Mention of any products, trademarks, or brand names does not constitute endorsement, nor does omission constitute criticism.

Editors

S.E. Hygnstrom, R.M. Timm, P.D. Curtis, M.E. Tobin, G.W. Witmer, and K.C. VerCauteren.